

MDOS BASIC VECTORS

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Here's a little more information concerning the vectors used by Micropolis BASIC for file control. My note in newsletter #68 was incomplete in regard to file control blocks (FCBs), and in response, George Maschino put me on the right trail in newsletter #69.

I still don't have the full story, but I ought to share what I have learned for the benefit of others using MDOS.

BASIC stores up to ten vectors in a table at 346Dh-3480h. Each vector points to the first byte of an FCB, if a corresponding file (numbered 0 to 9) has been opened. Each FCB consists of 45 bytes, as follows.

<u>Byte</u>	<u>Description</u>
1	01 = disk file. 02 = *P printer file. 03 = *T terminal file. 04 = *N null file (George's listing in #69 apparently has a misprint here.
2,3	(unknown)
4,5	Vector to the last character of the line number for the ERROR option in the BASIC program buffer (included in the OPEN statement for disk files.
6,7	Vector to the last character of the line number for the END option.
8	100h-PAGESIZE, where PAGESIZE is set in the OPEN statement for the *P file.
9-11	(unknown)
12,13	Vector to the last character of the line number for the ENDPAGE option in the OPEN statement for the *P file.
14,15	(unknown)
16	00 = non-disk file. 04 = disk file.
17	(unknown)
18,19	Vector to the first character of ERR\$ after an error is encountered in a disk operation. The string is copied to this location when the error occurs, from a data table in RES that begins at 1017h.

<u>Byte</u>	<u>Description</u>
20-23	(unknown)
24	Drive #.
25	(unknown)
26-35	Filename (ASCII).
36	Track # of first track in file + 80h.
37	File type.
38,39	File length parameter, one greater than the number of records in the file (high-low format).
40,41	(unknown)
42,43	GETSEEK pointer (low-high).
44,45	PUTSEEK pointer.

Somewhere in here, among the unknown bytes, there might be such things as the number of characters in ERR\$, the error number ERR, the lines-per-page counter, the logical page number, etc.

About half of the above bytes were described earlier by George, but I have put it all together here for convenience. It would be nice to have the complete description eventually.

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FILES IN YOUR FUTURE

by Buzz Rudow

I've been quite busy this month exploring the concept of making available the knowledge we already have. I'm open to comments. My idea, at the moment, is to create "journal" accounts in a variety of areas, and then add methods of manipulating and interrogating these "journals". I'll also try to make the journals, and their elements, available to the membership. *HOW* available is still to be determined.

One reason for the journal concept is to make the data that is understandable today, available today. Both you and I can start writing application programs, or developing procedures, to make the raw data more useful to the membership.

What I mean by a "journal" is a sequential grouping of items. The sequence is simply the order worked. It is analogous to a General Journal account in bookkeeping. The structure of the "journal" file must be such that all members can read and manipulate it.

This requirement would seem to limit us to a pure ASCII format.

I've been working with Digital Equipment Corp. (DEC) hardware and software at work lately, and find their handling of "areas of interest" to be understandable and convenient. Basically, DEC lets you access and organize by specific element number, title, keywords, or folder. I don't know whether we can imitate their software, but we can try.

DEC only has one journal. Our application seems to be made more difficult by my intent to keep distinctly different journals for:

- (a) Library Disks,
- (b) Newsletter Index,
- (c) Physical document/hardcopy information files, and
- (d) Membership list.

In addition, I propose we attempt some projects, which may result in other journals, or may just be hardcopy information. Examples of the projects are:

- (a) MDOS S/W availability list,
- (b) CP/M S/W availability list,
- (c) Applicable publications list,
- (d) Applicable User Groups list,
- (e) Applicable Sales & Service list, and
- (f) The creation/consolidation of information required to understand;
 - (1) MDOS,
 - (2) Micropolis Basic,
 - (3) CP/M on Micropolis, and
 - (4) CP/M on Vector Graphic.

What worries me is that categorizing all this data is a horrendously large job. Besides the ordeal of data entry, I'm concerned with the probability of inadequate planning, resulting in many reformatting requirements. Never-the-less, nothing ventured, nothing gained. So here goes.

My first problem is that I don't, as a rule, work on the Vector anymore. The newsletter is done with Desktop Publisher on an IBM clone. When I think about the Library Disk catalogs, I conclude that there are still people who will want the pretty, relatively compact, hardcopy version of the catalog. These people won't want to get a disk and run some software to see what is available.

Oh well, I guess that's my problem. I *think* I know how to move things between MSDOS & CP/M. I used to know how to move between MDOS & CP/M. Surely I can figure it out again.

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NEWSLETTER INDEX

by Buzz Rudow

The 1986 set of newsletters was my initial set of data for the journals. I went through and listed the article titles from each issue. I keyed them with a 6-digit number which I'd already been using to store the article. That is, 860503 is the 3rd article in the May (05) 1986 issue.

Then I arbitrarily set up what I thought were the major areas of interest. These are my folders. The idea is, if you had to file a physical copy of the article in one, and only one, place, where would you file it? Each of us would come up with different areas, or different names for the same subjects, or greater or fewer divisions. I tried to keep the number of folders down to a minimum.

Then I evaluated each article for information that was outside the folder's area. I called these smaller references KEYs. In concept, I didn't limit keys at all, though implementation causes some limitations.

As an example, the February 86 issue's 1st article was *Working with MODEM7 - Part 2*. I put this in the *I/O* folder. There was useful material in the article on the subjects of *ASM*, *DDT*, *Spellbinder*, and, of course, *MODEM7*. I made these items keys.

OK. Now, how do I set up a physical file? I, again arbitrarily, said I'd use a 62 byte record, which will be 64 if you add carriage return & line feed characters. I used two physical records to make a logical record. The first physical record will contain the reference #, the title, and the folder. The second physical record contains the keys.

What results, for the example cited, is a logical record that looks like this:

860201 WORKING WITH MODEM7 - PART 2
ASM,DDT,SPELLBINDER,MODEM7

C1/O

I have created a file with this sort of structure and will place it on the library. For the moment, so that we can indeed have an index, I manually sorted the data. The result is shown on pages 3 & 4.

You'll note that every entry ends with the word *Folder*, *Key*, and - what's this? **DERIVED?**

Well, after I'd done all my manual sorting, I saw some indexable areas that weren't covered by *Folder* or *Key*. These derived indexes won't be computable from the data. I suppose I could add new keys. The problem is that I run out of *Key* space in the record. That is, I use up the 62 characters.

(Continued on Page 5)

NEWSLETTER INDEX, 1986

96 TPI DRIVES KEY
860507 LETTERS

ACCOUNTING PLUS KEY
860704 LETTERS

ASM KEY
860201 WORKING WITH MODEM7 - PART 2

BDOS KEY
861004 LETTERS

BIOS KEY
861004 LETTERS

BITSTREAMER KEY
860101 WORKING WITH MODEM7

BLAST KEY
860203 LETTERS

BRANDLI ADVERTISING FOLDER
860306, 860605, 860905

C KEY
860704 LETTERS

CACHE/Q KEY
860304 DAMAN'S SOFTWARE CLEARANCE

CLASSIFIED FOLDER
860107, 860206, 860307, 860407, 860508, 860603,
860705, 860804, 860904, 861005, 861104, 861206

COMPUPRO KEY
860802 CP/M 3.0 ON MPS MOD II

CONNECT KEY
860203 LETTERS

CPM FOLDER
860303 PGMMING TIPS - KEYBOARD TO DISK TRANSFERS
--PIP
860402 PGMMING TIPS - USER AREAS
--USER,PIP,MEMORITE
860501 PGMMING TIPS - BACKUPS

CPM OPERATING SYSTEM FOLDER
860802 CP/M 3.0 ON MPS MOD II
--COMPUPRO
861004 LETTERS
--PROM,ZCPR3,BDOS,BIOS

CPM REMOTE KEY
861203 LETTERS
861205 MUDDY WATER DIRECTORY

CPM SOFTWARE FOLDER
860304 DAMAN'S SOFTWARE CLEARANCE
--CACHE/Q
860503 INFOCOM GAME SETUPS
--ZORK-I
860504 POWER
860507 LETTERS
--PEACH-4,96 TPI DRIVES
860702 MAILPLUS

CPM SOFTWARE; COMMERCIAL (derived)
See ACCOUNTING PLUS,ASM,BDOS,BIOS,BLAST
See C,CONNECT,DDT,EXECUPLAN,MEMORITE,MITE
See NETWORK,PIP,POWER,PUBLIC DOMAIN S/W
See SCOPE,SPELLBINDER

CPM SOFTWARE; PUBLIC DOMAIN (derived)
See MODEM7,PUBLIC DOMAIN

CRC KEY
860902 LIBRARY DISK SUBMITTALS

DAMAN ADVERTISING FOLDER
860104 MPS 1015 DRIVES
860105 CPM SOFTWARE INVENTORY CLEARANCE SALE
860106 CPM SOFTWARE SALE
860204 MPS 1015 DRIVES
860205 CPM SOFTWARE INVENTORY CLEARANCE SALE
860305 MDOS AND OSM SOURCE CODE AVAILABLE
860405 MPS, TANDON AND MCI DRIVES
860406 MPS SUPPLIES
860604 DAMAN ADVERTISEMENT
861103 DAMAN CLEARANCE SALE

DDT KEY
860201 WORKING WITH MODEM7 - PART 2

DEC KEY
860502 DISCUSSING OUR 'NEW LOOK', AND MY
'NEW INTEREST'

DISKS KEY
860203 LETTERS
861102 LETTERS

EXECUPLAN KEY
860902 LIBRARY DISK SUBMITTALS

FIND KEY
860902 LIBRARY DISK SUBMITTALS

HARDWARE (derived)
See 96 TPI,DISKS,HAYES SMARTMODEM
See LASER PTR,PRENTICE STAR

HAYES SMARTMODEM KEY
860101 WORKING WITH MODEM7

IBM KEY
860502 DISCUSSING OUR 'NEW LOOK', AND MY
'NEW INTEREST'

ICEX KEY
860902 LIBRARY DISK SUBMITTALS

INPUT/OUTPUT (I/O) FOLDER
860101 WORKING WITH MODEM7
--ZCB,BITSTREAMER,PRENTICE STAR,HAYES
--SMARTMODEM,VG 5005,VG 3005,MODEM7
860201 WORKING WITH MODEM7 - PART 2
--ASM,DDT,SPELLBINDER,MODEM7
860203 LETTERS
--BLAST,MODEM7,MITE,CONNECT,TANDON,DISKS

LASER PTR KEY
861102 LETTERS

MAILPLUS KEY
860702 MAILPLUS

MICROPOLIS/VG USERS GROUP

Newsletter #78
January 1987

MDOS KEY

860305 MDOS AND OSM SOURCE CODE AVAILABLE

MEMORITE KEY

860402 PGMMING TIPS - USER AREAS
860902 LIBRARY DISK SUBMITTALS

MICROPOLIS BASIC FOLDER

860301 MPS BASIC 4.0 VARIABLE AND ARRAY STORAGE
860403 MORE ON BASIC VECTOR POINTERS

MICROPOLIS CORPORATION FOLDER

860506 MPS IS DOING WELL
861204 MICROPOLIS STILL DOING WELL

MICROPOLIS/VECTOR GRAPHIC USERS GROUP SURVEY FOLDER

860606 MEMBER SURVEY
860701 SURVEY UPDATE
860801 MORE ON THE SURVEY
860901 THE SURVEY - PART 3
861001 THE SURVEY - PART 4
861101 THE SURVEY - PART 5

MISCELLANEOUS FOLDER

860202 COMPUTERS AND THEE
860302 MICROCOMPUTING IN INDIA
860502 DISCUSSING OUR 'NEW LOOK', AND MY
'NEW INTEREST'
--DEC,VAX,IBM
860704 LETTERS
--VG SYS-B,SERVICE,OSM,C,ACCOUNTING PLUS
860803 MUG BULLETIN BOARD?
861102 LETTERS
--SERVICE,LASER PTR,DISKS,NETWORK
861201 EDITOR'S NOTES

MITE KEY

860203 LETTERS

MODEM7 KEY

860101 WORKING WITH MODEM7
860201 WORKING WITH MODEM7 - PART 2
860203 LETTERS

NETWORK KEY

861102 LETTERS

OSM KEY

860305 MDOS AND OSM SOURCE CODE AVAILABLE
860704 LETTERS

PEACH-4 KEY

860507 LETTERS

PIP KEY

860303 PGMMING TIPS - KEYBOARD TO DISK TRANSFERS
860402 PGMMING TIPS - USER AREAS

POWER KEY

860504 POWER

PRENTICE STAR KEY

860101 WORKING WITH MODEM7

PROM KEY

861004 LETTERS

PUBLIC DOMAIN SOFTWARE FOLDER

860601 LIBRARY CATALOG
860902 LIBRARY DISK SUBMITTALS
--SD,ICEX,CRC,FIND,SAVE,

MEMORITE,EXECUPLAN,SCOPE

861202 CP/M LIBRARY UPDATES
861203 LETTERS
--CPM REMOTE
861205 MUDDY WATER DIRECTORY
--CPM REMOTE

SAVE KEY

860902 LIBRARY DISK SUBMITTALS

SCOPE KEY

860902 LIBRARY DISK SUBMITTALS

SD KEY

860902 LIBRARY DISK SUBMITTALS

SERVICE KEY

860704 LETTERS
861102 LETTERS

SPELLBINDER FOLDER

860401 OUR NEW LOOK
860404 TIME MANAGEMENT AND SPELLBINDER
860505 MASS MAILING & INDIVIDUAL CORRESPONDENCE
860602 SPELLBINDER'S CUSTOMIZED HELP FILES
860703 LEARNING ABOUT SDP MAILMERGE
861002 SDP UPDATE

SPELLBINDER KEY

860201 WORKING WITH MODEM7 - PART 2

TANDON KEY

860203 LETTERS

SYSTEM/Z FOLDER

860903 STATUS OF SYSTEM/Z

USER KEY

860402 PGMMING TIPS - USER AREAS

VAX KEY

860502 DISCUSSING OUR 'NEW LOOK', AND MY
'NEW INTEREST'

VECTOR GRAPHIC CORPORATION FOLDER

860102 VG FILES FOR CHAPTER 11 PROTECTION
860103 COMMENTS ON VG'S CHAPTER 11 FILING
861003 VECTOR SELLS SERVICE BUSINESS

VECTOR HARDWARE (derived)

See 96 TP1,BITSTREAMER,VG3005,VG5005
See VG SYS-B,ZCB,TANDON

VG 3005 KEY

860101 WORKING WITH MODEM7

VG 5005 KEY

860101 WORKING WITH MODEM7

VG SYS-B KEY

860704 LETTERS

ZCB KEY

860101 WORKING WITH MODEM7

ZCPR3 KEY

861004 LETTERS

ZORK-I KEY

860503 INFOCOM GAME SETUPS

To solve the problem, I could add another physical 62-character record to each logical record, thereby increasing the size of the file by 50%. Or, I could abbreviate a lot more of the keys. I've already used MPS for Micropolis, and VG for Vector Graphic. At the moment, I've done nothing.

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NEW MDOS LIBRARY ADDITIONS LIBRARY DISK 908, REVISION 00 MISCELLANEOUS

The following five files are from Keith MacAdams.

FILLNEEK BAS R=00 S=006 0000 D:0908 A:UTLY K:x 00001
Tests Mod II drives by writing files! 00001
on a freshly initialized diskette ! 00001
with the codes on each track, then ! 00001
testing whether the drive success- ! 00001
fully and repetitively can go back ! 00001
and forth from any one track to any ! 00001
other. Among other things, this is ! 00001
useful to generate continuous track ! 00001
to track head motions so that a ! 00001
scope can be set up to diagnose ! 00001
drive problems. ! 00001

DISKTEST BAS R=00 S=005 0000 D:0908 A:UTLY K:x 00002
Creates five files that each contain! 00002
26 full sectors, then tests that ! 00002
each sector of each file is accur- ! 00002
ately read back. ! 00002

MATINV BAS R=00 S=006 0000 D:0908 A:MATH K:x 00003
A matrix inversion routine (in BASIC! 00003
not FORTRAN) from "Data Reduction ! 00003
and Error Analysis for the Physical ! 00003
Sciences" (P.R. Bevington; McGraw ! 00003
Hill 1969). Dimension up to 9 x 9. ! 00003

LINFIT BAS R=00 S=004 0000 D:0908 A:MATH K:x 00004
A data fitting routine that gives ! 00004
slope, intercept, and rms deviation.! 00004

POLYFIT BAS R=00 S=00D 0000 D:0908 A:MATH K:x 00005
Fits a set of data points to a poly-! 00005
nomial, calculates optimized coeffi-! 00005
cients and rms deviation and gener-! 00005
ates an optimized model function ! 00005
between given limits. ! 00005

The following two files are a disk editor.
See Mel Dalton's article in Newsletter #73.

DDE 18 R=00 S=007 0000 D:0908 A:UTLY K:x 00006
DDES 04 R=00 S=016 0000 D:0908 A:UTLY K:x 00007

The following seventeen files are from Tom Ludwig. The are Psychology Demonstrations and Simulations.

MATH-FUNCT BAS R=00 S=00A 0000 D:0908 A:PSYC K:x 00008
MENU BAS R=00 S=004 0000 D:0908 A:PSYC K:x 00009
PIAGET BAS R=00 S=020 0000 D:0908 A:PSYC K:x 00010
STIMMAG BAS R=00 S=01A 0000 D:0908 A:PSYC K:x 00011
APPAVOID BAS R=00 S=01C 0000 D:0908 A:PSYC K:x 00012
ATTCHANGE BAS R=00 S=01B 0000 D:0908 A:PSYC K:x 00013
PSYCHIC BAS R=00 S=00C 0000 D:0908 A:PSYC K:x 00014
SKINNER BAS R=00 S=01F 0000 D:0908 A:PSYC K:x 00015
PAVLOV BAS R=00 S=01A 0000 D:0908 A:PSYC K:x 00016
PSYMENU BAS R=00 S=004 0000 D:0908 A:PSYC K:x 00017

TRIG.S.V1 90 R=00 S=00F 0000 D:0908 A:PSYC K:x 00018
SCREEN.BOR BAS R=00 S=00D 0000 D:0908 A:PSYC K:x 00019
DATA.IN.Z 90 R=00 S=024 0000 D:0908 A:PSYC K:x 00020
MENU.PI.Z 90 R=00 S=019 0000 D:0908 A:PSYC K:x 00021
LA.MON.SRC 04 R=00 S=022 0000 D:0908 A:PSYC K:x 00022
LA.MON.FC 08 R=00 S=004 0000 D:0908 A:PSYC K:x 00023
LA.MON.BC 08 R=00 S=004 0000 D:0908 A:PSYC K:x 00024

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CLASSIFIED

The Classified Section of the MUG Newsletter is available to all users, free of charge. Just call or write us with a description of what hardware, software, information, etc., that you want to obtain, or dispose of.

FOR SALE - Vector Graphic 4 with NEC 7700 printer. Make offer.

Kevin Bailey, Bailey Tax & Bookkeeping, 1933 14th Ave., Vero Beach FL 32960. Phone (305) 567-0863.

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FOR SALE - Vector Graphics 2600. Purchased as backup to a VG MZ. Used very little. Make offer.

Robert E. Meynardie. Phone (914) 534-8782, evenings after 7 PM EST.

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FOR SALE - An upgraded Vector Graphic System B, running the 4.1 monitor. It has a Mindless terminal, a Bitstreamer II (3 serial, 2 full parallel ports), Flashwriter II video board, 48K Dynamic Ram, 8K Static Ram, Micropolis single-sided disk controller (16 hard sector, 298K formatted) and Z-80 processor. All boards are original Vector.

FOR SALE - A second system, identical to the above, except that it has no terminal. There are monitor chips to run it as a standard system, or with any serial keyboard, which is its present configuration.

There are four Digital Research Computer LS-100 Ramdisk boards between the two systems, and their price is negotiable. The systems could be sold with or without these boards.

If both systems are sold, I also have spare boards that could be included as part of a package. These are 8K Static Ram, Z-80 processor, and disk controller. I have more than one of some of these. I also have two spare Bitstreamer I boards, with 1 serial and 2 parallel ports; one has an external DIP switch and cable for selecting baud rate which can be used normally, if the DIP switch is plugged into the main board.

Robert F. Morrisson, 2821 Ivydale Street, Wheaton MD 20902. Phone (301) 942-8726.

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MICROPOLIS/VG USERS GROUP

Newsletter #78
January 1987

MICROPOLIS PARTS & DOCUMENTATION

Maintenance Manuals

1000-Series Drive	\$ 47.50
1100-Series Drive	\$ 47.50

Operating Systems

PDS (MDOS) Version 4.0 (single-sided)	
Disks and manual	\$ 71.25
Manual only	\$ 47.50
Disks only	\$ 23.75
PDS (MDOS) VERSION 4.1 (double-sided)	
Disks and manual	\$ 95.00
Manual only	\$ 47.50
Disks only (with tech note)	\$ 47.50
CP/M 2.2 (single-sided)	\$150.00

Parts & Aids

Disk Controller, Model 1071	\$350.00
Head Pads	\$.50
Saunders Magnalube	\$ 4.50
Drive Motor/Tach Assembly	\$ 38.00
Drive Belt	\$ 6.05
Diagnostic Disk (requires MDOS)	\$ 47.50
Alignment Disk (specify 96 or 100 TPI)	
Single-Sided	\$ 47.50
Double-Sided	\$ 95.00

NOTICE TO DEALERS

As a service to its members, the MUG newsletter will include, in fact solicits, commercial advertisements relevant to members' needs. Any dealer, vendor, or service organization wanting to advertise must provide sufficient full or double page material, or must reimburse the MUG for reproduction of a single master.

MICROPOLIS/VECTOR GRAPHIC USERS GROUP NEWSLETTER

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For assistance with general information, MUG/Vector Graphic, Micropolis drives & parts, call Lynn at (205) 881-1697 during the Central Times of 9AM to 5PM. Buzz is sometimes around in the evening (Lynn will know) and from 9-12 on Saturday.

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